



# Phase III Stream Assessment Study: Potential Stream Restoration Projects

September 2018



# Project Team

## Consultant



## City Departments

Wood  
Environment &  
Infrastructure  
Solutions

**wood.**

Transportation  
and  
Environmental  
Services (T&ES)

Recreation, Parks  
and Cultural  
Activities (RPCA)

Office of Historic  
Alexandria

Department of  
Project  
Implementation  
(DPI)

# Stream Assessment Program

1. Protect, stabilize, and improve the City's waterways
2. Address Chesapeake Bay clean up mandates (action plan strategy)
3. Consistent w/City Council Strategic Goal #2\*



*\*“Maintain and improve the quality and sustainability of Alexandria’s Environment” through initiative to “enhance the ecological integrity of waterways by maintaining and improving stormwater and sanitary infrastructure and stream system health to minimize environmental impacts.”*

# Stream Assessment Studies

## Phase 1 Stream Categorization

*Mapping of streams, defining limits, and stream categorization*

## Phase 2 Assessment of Streams

*Stream habitat, infrastructure impacts, problem area, characteristics*

## Phase 3 Project Identification

*Potential project sites evaluated and ranked. Conceptual designs for top projects.*

# What Makes a Stream Healthy?

Physical

Chemical

Biological

1. Bed stability and diversity
  2. Sediment transport balance
  3. In-stream habitat & flow diversity
  4. Bank stability (native plant roots)
  5. Riparian buffer (streamside forest)
  6. Active floodplain
  7. Healthy watershed
- “Multiple Benefits” or “Co-Benefits”

# Phase III Stream Assessment



## Evaluation of Potential Projects

- Field Assessment
- Recommendations
- Decision Matrix and Priority Ranking



## Ranking and Conceptual Designs

- Conceptual Designs for top ranking projects
- Using Natural Channel Design (NCD) which emulates natural river systems
- Planning Level Cost Estimates



## Outreach

- Public and Stakeholder Outreach
- Consider feedback in design alternatives

# Potential Projects and Funding

## Top Two Restoration Projects

- Strawberry Run: ~900 LF
- Taylor Run: ~1900 LF

## SLAF Grant Application Submittals

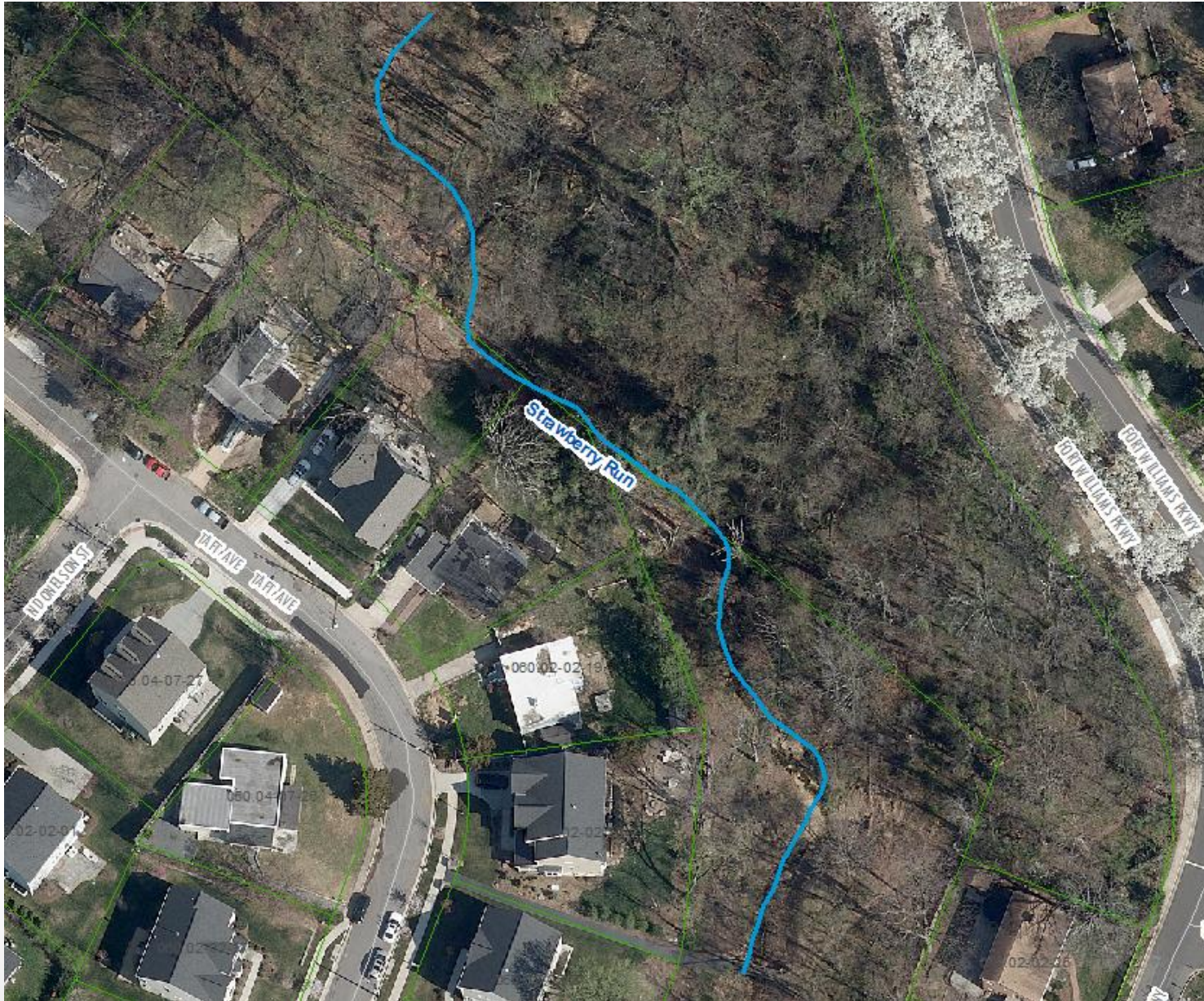
- 50/50 Matching Annual State Grants
- Council on September 25<sup>th</sup>

## Outreach

- Parks and Recreation Commission
- Civic Association and HOA Meetings
- Public Meetings



# Strawberry Run near Taft Avenue



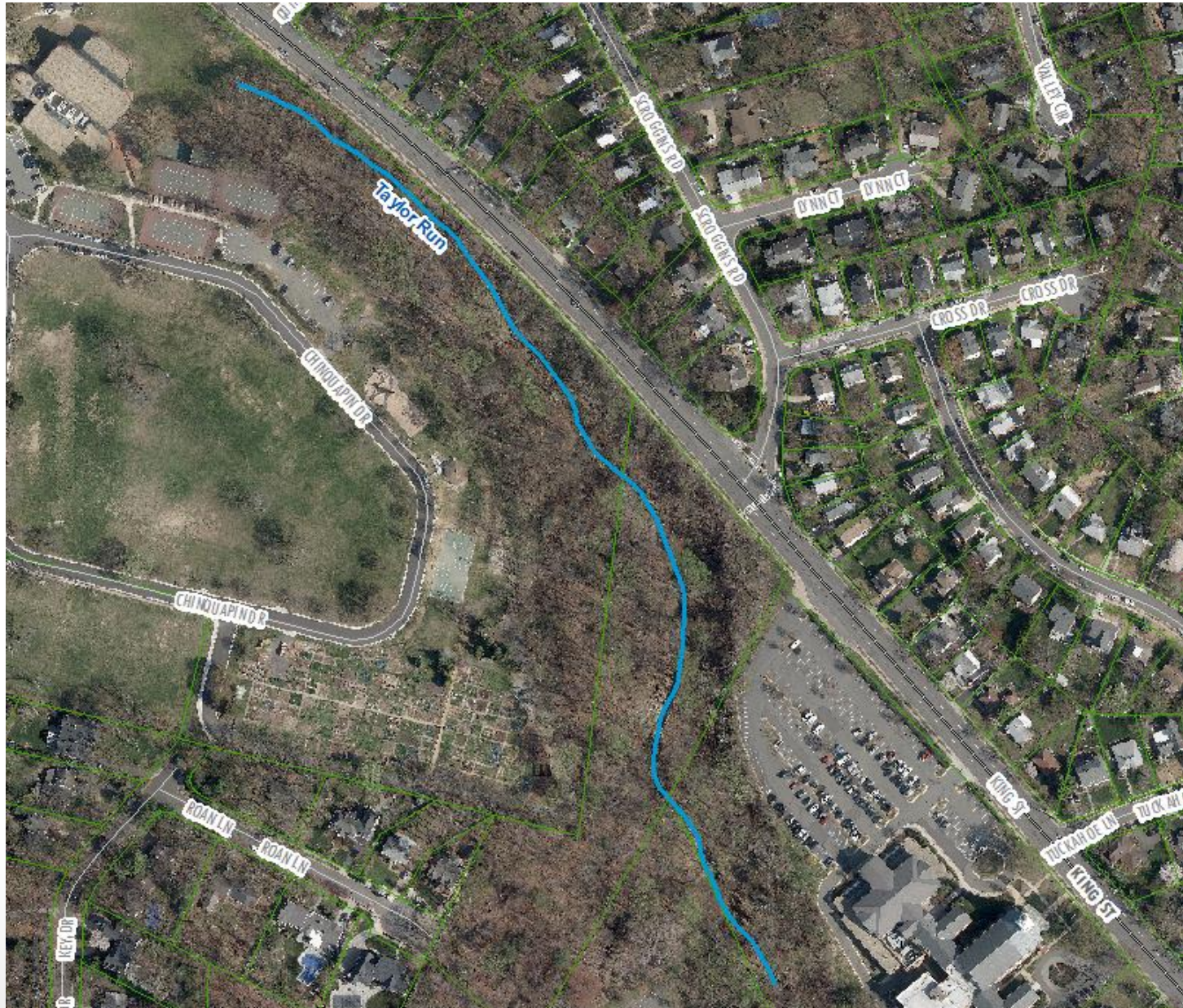


# Strawberry Run





# Taylor Run near Chinguapin Park





# Taylor Run





# Strawberry Run – Downstream Project



After

Before





# Strawberry Run – Downstream Project



After

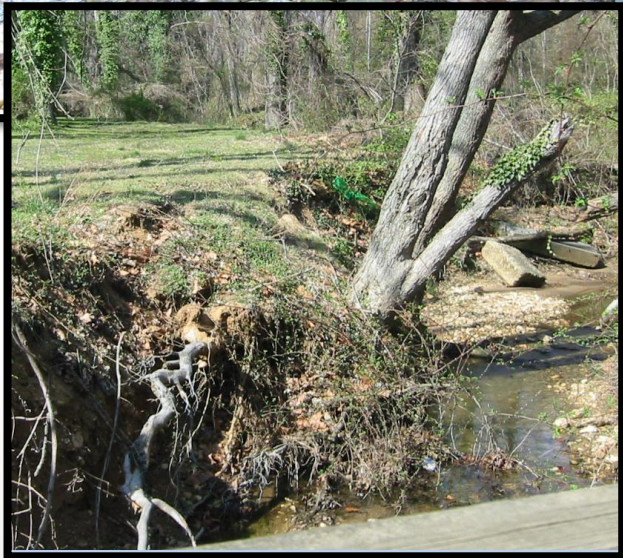


Before





# Strawberry Run – Downstream Project



Before



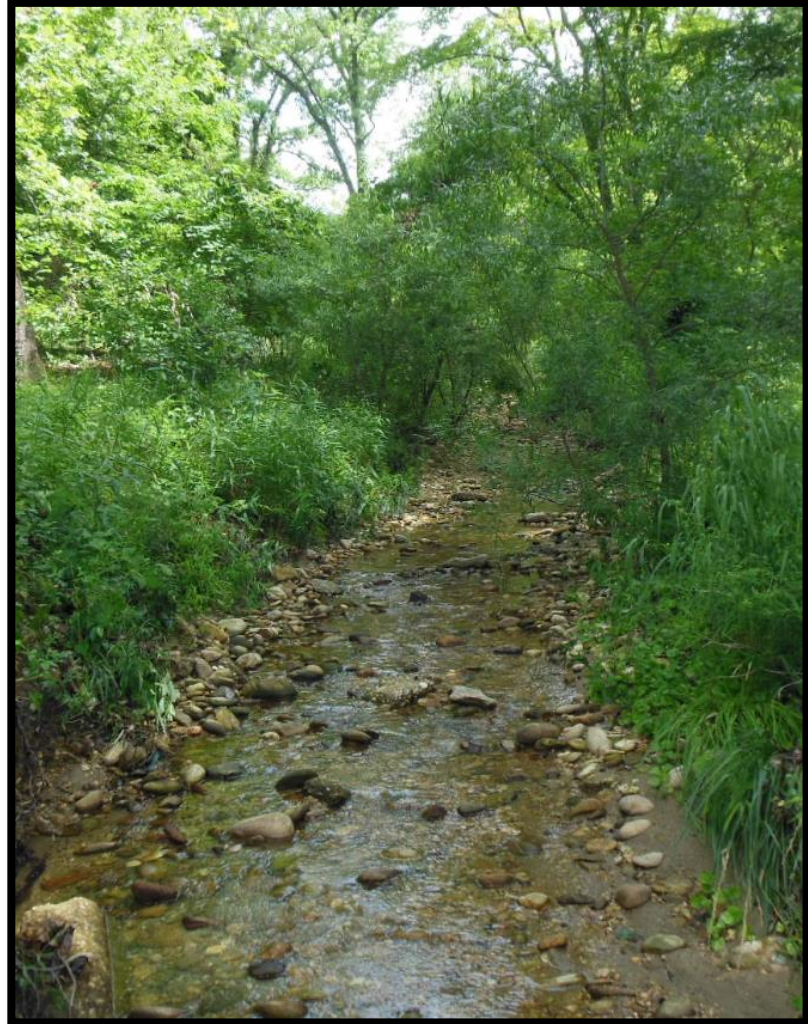
After



# Strawberry Run – Downstream Project



Before



After

# Next Steps

- September 25 – Council consider 50/50 matching grants
  - Strawberry Run: \$1.6M
  - Taylor Run: \$4.5M
- Extensive stakeholder outreach
- Interdepartmental team incorporates feedback into next phase of design
- Follow up stakeholder outreach